File

State of California
The Resources Agency
DEPARTMENT OF WATER RESOURCES
DIVISION OF SAFETY OF DAMS

INSPECTION OF DAM AND RESERVOIR IN CERTIFIED STATUS

Name of dam Oroville Dam Dam No. 1-48 County Butte
Type of dam Earthfill Type of Spillway Gated Concrete Weir and Chute
Water is feet 27.97 feet below spillway crest and 49.97 feet below dam crest.
W.S. 872.03 feet
Weather Conditions Overcast
Contacts made Kevin Dossey, OFD; Dan Garcia, Bill McLaughlin, O&M.
Reason for inspection Periodic Evaluation (2nd inspection)

Important Observations, Recommendations or Actions Taken

No new recommendations are being made as a result of this inspection. The inspection team did not to enter the foundation galleries due to a strong chemical smell.

The latest FERC Part 12 Report was completed in March 2005. DSOD participated in the Part 12 process and agreed to accept the report in lieu of convening a separate Dam Safety Review Board. No dam safety issues were included in the recommendations by the consultants.

Conclusions

From the known information and the visual inspection, the dam, reservoir, and the appurtenances are judged satisfactory for continued use.

Item No.*	Item Name and Observation and Comment
A1-A4	**Dam** - The crest was in good condition. The few cracks observed along the asphalt roadway appeared to be normal. The upstream and downstream embankment slopes appeared to be stable. The usual damp zone near the left abutment of the downstream embankment was made visible by the lush vegetation. This zone may extend farther towards the center of the dam than previously thought, based on the look of the vegetation. Vegetation and rodent control remain satisfactory. The visible rock wave protection was in satisfactory condition. The left gallery was entered at the top. A strong chemical smell was immediately noted. As a result, the decision was made not to enter the galleries. **Bidwell Bar Canyon Saddle Dam, Parish Camp Saddle Dam** - The reservoir was not up on the embankments. Having inspected the embankments earlier in the year, the decision was made not to inspect them until the reservoir fills. **Palermo Tunnel** - The tunnel was not operating, and was not inspected.
6,8,10	**Spillway** - The spillway chute and walls were observed from several locations. The walls and chute floor appeared to be stable, and in good condition, see photograph 1. The wall

Typed by wmp
Date 6/7/05
cc for Book/Owner

Use Field Sheet Standard Numbers and Items (See Reverse Side)

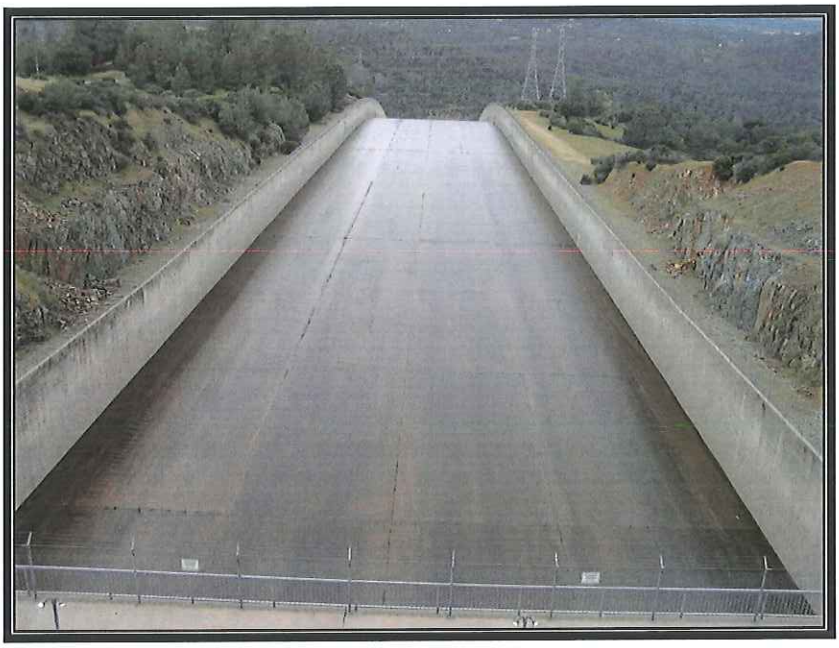
Inspected by WPennington 6/7/05
Date of Inspection 5/17/05
Date of Report 6/7/05
Photos taken? Yes X No
Sheet 1 of 3 Sheets
HW 6/8/05

Observations and Comments (Continued)

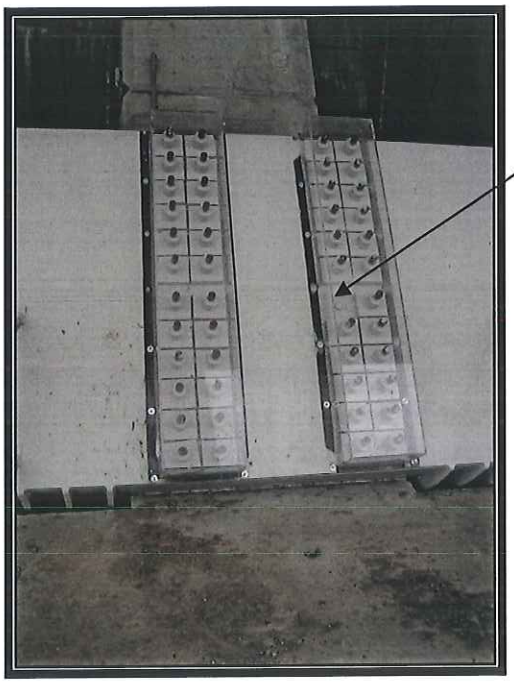
Item No.*	Item Name and Observation and Comment
	Spillway cont. - drains just beyond the vertical curve in the chute were running. The flip bucket was observed from the highway and appeared to be in good condition. The flood control outlet structure, radial gates, and mechanical equipment appeared to be in satisfactory condition. The radial gate seals were leaking in amounts historically consistent with the reservoir elevation. The protective coatings on the gates and operating equipment remain intact. The wire ropes, lifting hitches, tendon anchors, trunnions, and trunnion beams appeared to be in satisfactory condition. Photograph 2 shows a tendon anchor connection that broke several years ago. No new spalling has occurred along the left and right bridge abutments as demonstrated by the unbroken monitoring paint. The existing diagonal cracks on the bridge abutments were unchanged. The emergency spillway weir remains in good condition as shown in photograph 3.
14,16	**Outlet** - The valve area was not entered due to air quality concerns in the gallery.
17	**Seepage** - The seepage at the toe weir was normal, and very low for a dam of this size. No seepage problems were observed along the groins or the embankment.
18	**Instrumentation** - The instrumentation program had a thorough review during the recent FERC Part 12 inspection and PFMA. ***Hydraulic piezometers***: Of the 56 units hydraulic piezometers installed during construction, only 5 are thought to be functional. These are read weekly. As of the last performance report, the readings are below the action levels, and are normal. Action levels for the active piezometers are given in Table 7 of Appendix D in the FERC Part 12 Report dated March 2005. ***Seepage***: Combined internal drainage and the total seepage at the toe weir remain relatively low, and well within acceptable limits. Actions levels for toe seepage and internal drainage are given in Tables 10 and 11 of the FERC Part 12 report. ***Embankment settlement and horizontal movement***: The recent movement data appears to be consistent with historical trends, and indicates that the dam is stable. Action levels were

Observations and Comments (Continued)

Item No.*	Item Name and Observation and Comment
	Embankment settlement and horizontal movement cont.: not established. ***Extensometers and joint monitoring***: Deformations are measured in the power house and the core block on a quarterly basis. Seven mechanical extensometers, 3 in block 9 and two each in blocks 11 and 14 are used to monitor the existing cracks in the core block parapet wall. Action levels were not established. A total of 38 core block joints and 9 gallery joints are monitored. Movement is normal. Action levels were not established.



1. The spillway walls and chute appeared to be stable and in good condition. The wall drains beyond the vertical curve in the chute were flowing.



2. A typical tendon arrangement for the radial gate trunnion beams is shown. An anchor that broke several years ago is shown at right. Corrosion protection is provided by the plastic covers.

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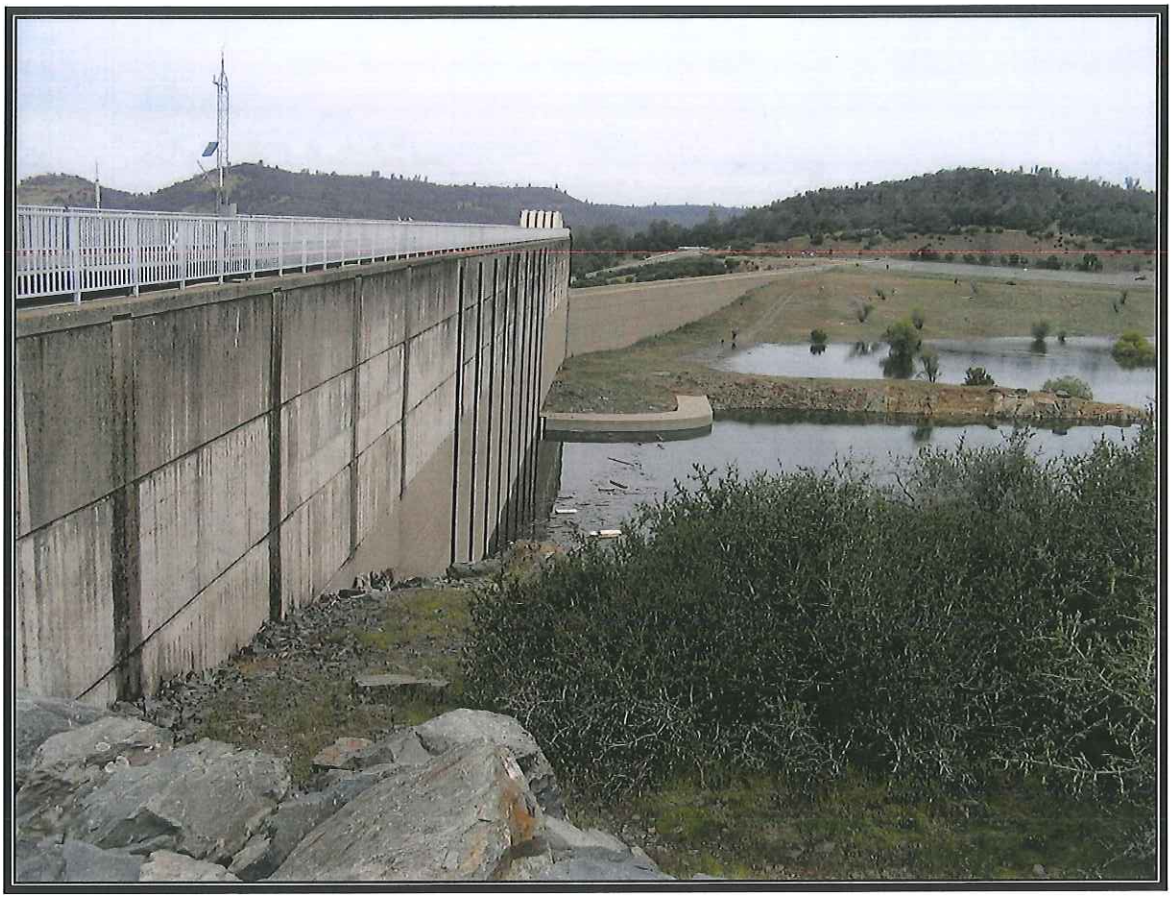

1. The upstream side of the flood control outlet and the emergency spillway are shown.

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